

étroite, et de là il s'étend sans aucune interruption jusqu'aux  $\frac{2}{3}$  ou les  $\frac{3}{5}$  de la longueur totale. Les polypes placés sur l'extrémité de l'axis sont les plus petits de tous (Proc. Zool. Soc. 1865, p. 663, and 1864, t. 22. fig. 2)." This misunderstanding of the passage quoted by Dr. Gray tends more than ever to confuse our ideas on the subject, whether we consider *Hyalonema* a coral, a zoanthoid polype, or a sponge. M. Barboza du Bocage certainly does not mean in the passage to infer that the thin end of the column covered with protuberances was the basal end, and was accordingly originally immersed in the basal spongy mass.

Dr. Gray has been pleased to say of my recently published Monograph of the British Sponges, "But all the descriptions of this work are so indistinct and crowded with technicalities peculiar to the author, that they are very difficult to understand, and render a new examination of the species and a new work on the subject requisite." I regret that I cannot furnish the learned author with any means of comprehending my descriptions except those contained in my volumes; but it is consolatory to know that there are other naturalists who can do so. No one has advocated the necessity of every newly discovered animal having a definite name more strongly than Dr. Gray; but that which is applicable to the whole animal does not, in his opinion, seem equally so to its parts. On this question I must beg leave to differ from him. I found a great portion of the British Sponges were new to our Fauna, and nearly all of their parts without names by which to designate and describe them. I was therefore compelled to name and describe both the component parts and the species; and whether I have or have not succeeded in employing suitable designations, I can assure the author of the paper that I should hail the accomplishment of a similar work to mine, exhibiting a greater amount of talent and research, with unfeigned pleasure, for the sake of the advancement of a branch of natural history the study of which has afforded me many years of pleasure and satisfaction.

---

LI.—*On the Systematic Position of the Pronghorn* (*Antilocapra americana*). By P. L. SCLATER, M.A., Ph.D., F.R.S., Secretary to the Zoological Society of London\*.

THE author stated that his chief object in the present communication was to bring into more prominent notice a very impor-

\* Abstract of a paper read before the British Association, Section D., Aug. 23, 1866. Communicated by the Author.

tant discovery regarding this animal, that had been made in the Zoological Society's Gardens in the Regent's Park during the past year, and had formed the subject of a paper read by Mr. Bartlett, the Superintendent of the Gardens, at one of the Society's meetings in 1865\*. This discovery was, that the horns of the Pronghorn were naturally shed every year—a phenomenon hitherto quite unknown among the Bovidæ or hollow-horned Ruminants, with which the Pronghorn had always hitherto been associated, and only occurring in the allied Deer-family or Cervidæ. Mr. Bartlett's observations had been made upon a young male of this scarce mammal, which had been acquired for the Society in January 1865†, and had since lived in good health in the Menagerie. This animal had shed both its horns on the 7th of November, 1865; and a finer pair had since grown, which would, no doubt, be shed in like manner in Nov. 1866. Since Mr. Bartlett's publication of this novel fact, full confirmation of it had been received by the Zoological Society, in a communication from their Corresponding Member, Dr. Colbert A. Canfield, of Monterey, California, who had come to the same conclusion as Mr. Bartlett, from observations on this animal in a state of nature made in the county of Monterey, in some parts of which the Pronghorn was very common‡.

The author exhibited a skull of the Pronghorn with the horns fully developed and ready to be cast off shortly, and explained the mode in which he supposed the shedding to be effected. After the old horn was cast off, the horny matter, which was at first entirely confined to the upper end of the new horn, gradually spread itself down to its base, enveloping the numerous hairs with which the new horn was clothed when first appearing, and ultimately checking their growth and destroying their vitality. After the horn was perfected and hardened, new hairs developed themselves beneath the epidermis, and, not being able to force their way through the horny covering, became, as the author believed, the chief agent in causing the shedding of the horn. As regards the general structure of the horns of the Pronghorn, it was quite evident that they had little or nothing in common with those of the Deer. The latter were formed of bone developed upon a process of the frontal bone, and were more correctly termed *antlers*, whereas the horn of the Pronghorn consisted of true horn (like those of the ordinary Bovidæ) gradually developed

\* "Remarks upon the Affinities of the Prongbuck," by A. D. Bartlett, Superintendent of the Society's Gardens. (Proc. Zool. Soc. 1865, p. 718.)

† See notice and figure, Proc. Zool. Soc. 1865, p. 60, pl. 3.

‡ See Dr. Canfield's paper "On the Habits of the Prongbuck, and the periodical shedding of its horns," Proc. Zool. Soc. 1866, p. 105.

from the epidermis, the skin remaining complete underneath them.

Two other points in which the Pronghorn differed from all the other known Bovidæ were the furcation of the horns and in the absence of the "false hoofs," as the stunted terminations of the rudimental second and fifth digits of each foot are termed, in which latter respect it resembled the Giraffes (*Camelopardalis*). These three important modifications of structure, when taken together, induced the author to believe that it would be necessary to raise the genus *Antilocapra* to the rank of a family in the series of Ruminantia, which he proposed to arrange somewhat as given in the subjoined table.

Order ARTIODACYLA.

Division RUMINANTIA.

I. RUMINANTIA PHALANGIGRADA.

Placenta diffusa. Stomachus tripartitus: dentes primores  $\frac{1-1}{3-3}$ , canini  $\frac{1-1}{1-1}$ , molares  $\frac{6-6}{6-6}$  aut  $\frac{5-5}{5-5}$ : pedes didactyli ..... 1. *Camelidæ*.

II. RUMINANTIA UNGULIGRADA.

a. Placenta polycotyledonaria. Stomachus quadripartitus: dentes primores  $\frac{0-0}{3-3}$ ; canini  $\frac{0-0}{1-1}$  aut  $\frac{1-1}{1-1}$ ; molares  $\frac{6-6}{6-6}$ .

a'. Pedes didactyli, ungulis succenturiatis nullis.  
 { a". Cornua in sutura coronali posita, ossea, brevia, pelle tecta ..... 2. *Camelopardalidæ*.  
 { b". Cornua ex osse frontali orta basi ossea, parte superiore cornea, furcata, decidua . 3. *Antilocapridæ*.

b'. Pedes tetradactyli, ungulis succenturiatis duabus.  
 { c". Cornua ex osse frontali orta, basi ossea, parte superiore cornea, non furcata, permanentia ..... 4. *Bovidæ*.  
 { d". Cornua ex osse frontali orta, omnino ossea, decidua ..... 5. *Cervidæ*.  
 { e". Cornua nulla, dentes canini marium exserti ..... 6. *Moschidæ*.

b. Placenta diffusa. Stomachus tripartitus; dentes primores  $\frac{0-0}{3-3}$ ; canini  $\frac{1-1}{1-1}$ , molares  $\frac{6-6}{6-6}$ ; pedes tetradactyli; cornua nulla ..... 7. *Tragulidæ*.

In conclusion the author called attention to the geographical distribution of the Ruminants, as shown in the subjoined table, in which the geographical divisions employed were the same as those used by the author in his paper on the distribution of

Birds\*, but which he believed to be equally applicable to the class of Mammals.

Table of the Distribution of Ruminants.

	ORBIS NOVUS.		ORBIS ANTIQVUS.			Regio Australiana.
	Regio Neotropica.	Regio Nearctica.	Regio Palearctica.	Regio Æthiopica.	Regio Indica.	
1. Camelidæ .....	.....	.....	Camelus			
2. Camelopardalidæ {	<i>Auchenia</i>					
3. Antilocapridæ.... {	.....	.....	.....	Camelopardalis		
	.....	<i>Antilocapra</i>				
	.....	( <i>Haplocerus</i> )	<i>Antilope</i>	<i>Antilope</i>	<i>Antilope</i>	
4. Bovidæ .....	.....	.....	<i>Capra</i>	<i>Capra</i>	<i>Capra</i>	
	.....	<i>Ovis</i>	<i>Ovis</i>	.....	<i>Ovis</i>	
	.....	<i>Ovibos</i>				
	.....	<i>Bos</i>	<i>Bos</i>	<i>Bos</i>	<i>Bos</i>	
	.....	<i>Tarandus</i>	<i>Tarandus</i>			
5. Cervidæ .....	<i>Cervus</i>	<i>Cervus</i>	<i>Cervus</i>	.....	<i>Cervus</i>	
	.....	.....	.....	.....	<i>Cervulus</i>	
6. Moschidæ .....	.....	.....	<i>Moschus</i>			
	.....	.....	.....	.....		
7. Tragulidæ .....	.....	.....	.....	<i>Hyomoschus</i>		<i>Tragululus</i>

LII.—On the Existence of Hyalonema in a Fossil State.

By Prof. E. SUESS, of Vienna.

To the Editors of the Annals of Natural History.

GENTLEMEN,

A very interesting note on the "Glass-Rope *Hyalonema*," by Dr. Gray, in your last Number induces me to give the following supplement.

A very common fossil of the Yorkshire Mountain Limestone, described by M'Coy under the name "*Serpula parallela*," is, in fact, a true "Glass-Rope." Specimens of this curious fossil were first given to me by my excellent friend Mr. Edw. Wood, of Richmond, in 1861; and I took a good number of specimens with me to Vienna, because the siliceous nature of the fossil, in a rock the other fossils of which are not changed into silex, seemed to me to deserve some closer observation. I soon found out the cause of this curious difference, and published a note on the true relations of *Serpula parallela* in the 'Verhandlungen' of the Vienna Zoological Society for 1862 (vol. xii. pp. 85 & 86). I hope that English palæontologists, after having read this note and reexamined the fossil, will agree in naming it *Hyalonema parallellum*.

Yours most respectfully,

EDWARD SUESS,

University, Vienna.

Vienna, Oct. 13, 1866.

\* Journ. Proc. Linn. Soc. ii. p. 130.